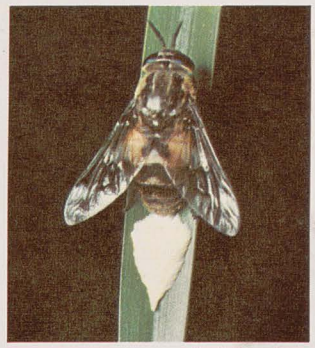
STINGING AND BITING PESTS

For safe and effective use of insecticides, always identify the problem correctly.



1. Deer fly *(sucks blood)*

5. Brown recluse spider *(poisonous bite)* and close-up of "fiddle-shaped" marking on back

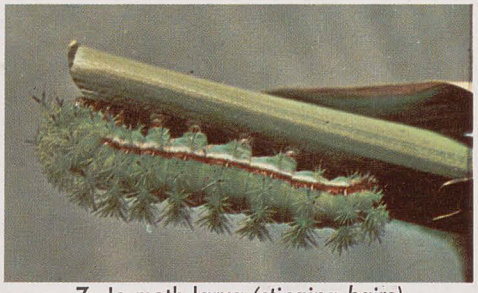
8. Yellow jacket *(stings)*

2. American dog tick *(attaches and sucks blood)*

6. Black widow spider *(poisonous bite)*

9. Sweat bee *(stings)*

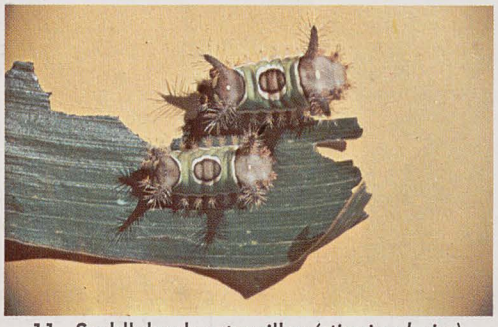
3. Mosquito *(sucks blood)*



7. Io moth larva *(stinging hairs)*

10. Honey bee *(stings)*

4. Wheel bug *(punctures skin)*



11. Saddleback caterpillar *(stinging hairs)*

Prepared by Extension Entomologists of the North Central States in cooperation with the Federal Extension Service, U.S. Department of Agriculture

STINGING AND BITING INSECTS

1. **DEER FLY,** (various species). The deer fly and the closely related horse fly are common insects along lake shores and in Northern Minnesota forests. Both have broad mouthparts which produce skin punctures that usually bleed freely. Some people are quite sensitive to the saliva which the fly injects after it pierces the host (human or animal being bitten) skin. The deer fly seems to prefer biting a person's head and will often become entangled in the hair. Livestock may also be severely attacked. Some species of deer and horse flies are known to transmit disease organisms on their mouthparts.

2. **AMERICAN DOG TICK,** *Dermacentor variabilis* (Say). It is often referred to as the wood tick because of its presence in grassy margins and open areas associated with hardwood forests. The young, called larval ticks, feed on small mammals, while the adults attach to a number of larger mammals, including man. Ticks reach their host by crawling up on plants and grasping as it brushes by. The American dog tick is distributed over the eastern half of North America and serves as a vector for Rocky Mountain spotted fever and tularemia in that area. Its salivary secretions can cause a paralysis in man and animals following tick attachment near the neck.

3. **MOSQUITO,** (various species). Fifty different kinds of mosquitoes are found in Minnesota. Their larval stages develop in an unusual variety of water pools, ranging from those in pitcher plants to tree holes to large shallow ground pools. About 30 may feed on man while an additional half dozen feed on livestock and poultry. The kind of mosquito which most commonly feeds on man is *Aedes vexans.* It is found throughout the state, breeding in temporary pools. Although it does not transmit disease, a number of other species are capable of transmitting western equine encephalomyelitis from bird reservoirs to man. Mosquitoes are one of man's major insect pests.

4. **WHEEL BUG,** *Arilus cristatus* (Linnaeus). The family of insects to which the wheel bug belongs, feeds largely on animal hosts. A few, like the wheel bug, do feed on man, but most act as predators on other insects. The bite of the wheel bug is extremely painful and commonly leads to pronounced thickening of the skin in the area of the puncture. It is quite rare in Minnesota.

5. **BROWN RECLUSE SPIDER,** *Loxosceles reclusa* Gertsch and Mulaik. To date no brown recluse spiders have been found in Minnesota. This spider's geographic distribution extends from southern Iowa into the southern United States and Mexico. When, and if, it does reach Minnesota, it will probably be found first in warehouses or other large buildings. There is concern that it might be carried into the state by vacationers to the South and Southwest. The web it builds is sticky and lacks design. The spider's bad reputation comes from the local necrosis it causes following biting. Hundreds of dead spiders are sent to the University of Minnesota each year by people who believe they have found the brown recluse. Most people confuse it with common spiders.

6. **BLACK WIDOW SPIDER,** *Latrodecus mactans* (Fabricius). The hour glass spider occurs throughout the U.S., but is not common in Minnesota. Shy and retiring, its fearsome reputation is not at all supported by fact. However, when camping or traveling, one should avoid little used privies as the black widow appears to prefer these for web building. There are probably no more than ten human bites yearly in the U.S., with the average over a period of years — less than one fatality per year.

7. **IO MOTH LARVA,** *Automeris io,* (Fabricius). Many people who handle hairy moth larvae suffer a skin rash or blistering. This blistering is caused by urticarial hairs (ones which are either hollow and contain a toxin or are simply mechanical and irritate the skin). Sometimes one suffers a reaction just from handling the cocoon which the larva spun. The *Io* is one of a number of Minnesota caterpillars capable of causing such reactions.

8. **YELLOW JACKET,** (various species). Almost everyone is acquainted with the paper nest building wasps. They are common visitors at summer picnics, where they are attracted to just about everything — including pickles, olives, potato salad. The wasps themselves are predators so they are only harmful when they are defending themselves or their home. A single wasp is capable of repeatedly stinging and is very aggressive when disturbed. The sting is only dangerous to a person sensitive to the venom. People sensitive to wasp stings tend to be those with asthma and/or allergies. They should avoid wasps or carry the proper therapeutic drugs with them.

9. **SWEAT BEE,** (various species). These are members of a group of solitary bees called Halictids. They are attracted to people who are sweating heavily, hence the name sweat bee. A person would expect to encounter sweat bees in rural or wilderness areas. The normal precautions should be observed if a person is sensitive to insect stings. Usually the sting of the sweat bee is less severe than stings of wasps or honey bees.

10. **HONEY BEE,** *Apis mellifera* (Linnaeus). This is one of man's most useful insects providing pollination for many fruit and seed crops as well as producing honey and beeswax. Minnesota has about 100,000 colonies of bees and is one of the leading beekeeping states in the nation. However, the worker honey bee is capable of stinging man and other animals and will readily do so when provoked. Simply avoiding honey bees will greatly reduce chances of being stung. A single worker bee can only sting once, leaving the stinger along with part of the bee's abdomen sticking in its victim. Always remove the stinger immediately and correctly to reduce the introduction of venom. Pushing the stinger out with the edge of a knife held flat to the skin provides less chance for injecting more venom rather than pinching the stinger with fingers or tweezers. If you are sensitive to this sting, or have a known history of sensitivity to other insect stings, always carry the appropriate drugs for immediate post-sting treatment. Few people suffer fatal stings each year but some of these deaths might be prevented with immediate treatment.

11. **SADDLEBACK CATERPILLAR,** *Sibine stimulea* (Clemens). The saddleback is another moth larva having urticarial hairs. It is a rather interesting and beautiful larva but is rarely found in Minnesota.

Current Control Information

The information and color illustrations presented here are designed to help you correctly identify some pests. These pests and the problems they cause do not change, but the methods of dealing with them do. Contact your local county agent or state extension entomologists for current methods of control.

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